BIOCHEMISTRY

Holt, K. S. and **Raine, D. N.** (Editors). *Basic Concept of Inborn Errors and Defects of Steroid Biosynthesis.* Proceedings of the Third Symposium of The Society for the Study of Inborn Errors of Metabolism. Edinburgh, 1966. Livingstone. Pp. vii+80. Price 15s.

NO MAN CAN hope to be familiar with the full scope of this little book. All the more important that its hard core—the inherited defects of aldosterone, cortisol and testosterone biosynthesis—is supported by short reviews of related subjects. In a most stimulating paper Raine traces the evolution of Archibald Garrod's idea of "inborn errors" from the vague concept of "diathesis" early in the nineteenth century. Korner then describes, concisely but clearly, the biochemical basis of protein synthesis.

Cholesterol is the precursor of the nine or ten specialized steroid hormones. Two of these hormones, cortisol and aldosterone, are derived from cholesterol by a series of eight, enzyme-activated, reactions. The result of absent or reduced enzyme has been described for five of these. Edwards explains the laboratory methods on which the diagnosis of these "blocks" is based. In a comprehensive account Visser discusses these blocks in relation to aldosterone biosynthesis and puts forward a possible mechanism for the "salt-losing" syndrome. The secondary association of enhanced androgen synthesis is discussed by Galal and Rudd. Hubble links these various biochemical disturbances in a clinical perspective-congenital adrenal hyperplasia. He estimates the frequency of this homozygous condition as about 1: 7255 in Birmingham, indicating a gene frequency of about 1: 44.

The book ends with a brief account of Kay's attempts to treat a patient with inherited lymphopenia by "grafting" foetal liver cells—a useful reminder of the common ground of immunity and clinical biochemistry.

This little volume illustrates the intense activity at the interface between clinical biochemistry and genetics. It will be essential for those working close to these fields and especially congenital adrenal hyperplasia. For the more general reader it provides help in seeing the general pattern, without hiding the gaps in knowledge.

G. H. LATHE

PSYCHIATRY

World Health Organization. *Research in Genetics and Psychiatry: Report of a WHO Scientific Group.* Technical Report Series No. 346. Geneva, 1966. WHO. Pp. 20. Price 3s. 6d. Obtainable from HMSO.

THIS TWENTY-PAGE BOOKLET provides a bird's eye view of the study of psychiatric genetics, where it has got to and where it seems to be going—the sort of view that can only be obtained from the top of the tree. The scientific group met in Geneva in November 1965; it was chaired by Professor E. Inouye; the members were Dr. N. Juel-Nielsen, Dr. D. W. Kay, Dr. S. S. Kety, Professor Jérôme Lejeune, Professor N. E. Morton, and Dr. M. E. Vartanjan; the Secretariat was Professor E. Essen-Möller, Dr. B. A. Lebedev and Professor P. E. Polani. Dr. Eliot Slater was unfortunately not able to attend.

Where do the experts think the next advances will come? Paradoxically it is the study of environmental factors by geneticists which now looks most promising. The outcome of MZ twins reared apart, or subjected to some different experience, reveals the influence of environment with genotype controlled; similarly with the retrospective study of MZ twins who have turned out differently. They recommend that twin studies should start from birth registers. The effect of environmental factors in the aetiology of mental illness can also be studied to good advantage by prospective studies of high-risk cases, such as the children of mentally ill parents, especially when these are brought up in foster homes.

As far as strictly genetic analysis goes, they favour the search for major genes, with particular emphasis on the recognition of "carrier states" by various devices.